

PATENT SPECIFICATION

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DRAWINGS ATTACHED.

Inventor:—HAROLD IAN DOHERTY.

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COMPLETE SPECIFICATION.

Device for Trimming Paper and Like Sheet Material.

We, EDWARD DOHERTY & SONS LIMITED, a British Company, of Eedee House, Charlton Road, Edmonton, London, N.9, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to an improved device for trimming paper and like sheet material comprising a rotary cutter blade and a longitudinal counter blade, said rotary blade being carried by a mounting which is hinged to enable the rotary blade to be moved to and from a position where part thereof laps the longitudinal blade under spring pressure and which is movable lengthwise of the device so that when the said part is in lapping position material lying in the path of the rotary blade as the latter is moved with its mounting lengthwise of the device is sheared by the joint action of the two blades.

The rotary blade is moved from its lapping position in relation to the longitudinal blade when it is desired to clean the device and to replace either blade or both blades. The need so to move the rotary blade, but for the invention, gives rise to the disadvantage that the person moving the said mounting on the hinge axis has to press his fingers against the rotary blade in order to overcome the spring pressure and enable the rotary blade to move cleanly away from the longitudinal blade when the rotary blade has to be turned away therefrom on the hinge axis or to enable the rotary blade to be cleanly positioned opposite to the longitudinal blade face bearing the cutting edge, the finger pressure being released when the rotary blade is so positioned. The operation

of applying finger pressure to the rotary blade is troublesome and can result in cut fingers. Moreover, a sufficient area of the rotary blade has to be left exposed to permit of easy access to the blade when the finger pressure has to be applied to it.

In accordance with the invention, means operable from a zone lying clear of the rotary blade is provided on the said mounting adapted to effect displacement of the rotary blade in a direction opposite to that in which said blade is urged by the spring which thrusts it into lapping position with respect to the pressure so that the said mounting, with the rotary blade, can be turned on its hinge axis without the rotary blade fouling the longitudinal blade. One suitable means comprises a push button having limited sliding movement on a spindle which bears the rotary blade, the push button being located on an end of the said spindle at that side of the said blade opposite to the side at which the spring pressure is applied.

The said spindle is preferably borne by a carriage slidable on and turnable around the axis of a longitudinal guide rail. Substantially the whole of that part of the rotary blade not lapping the longitudinal blade preferably lies within a shell which prevents accidental contact of an operator's hand or fingers with the said blade. This shell comprises part of the carriage for the said blade; it preferably has a knob at its top to facilitate longitudinal movement of the mounting and therefore of the rotary blade. The means for depressing the rotary blade comprises a pair accessible externally of the shell. When the said means comprises a push button the head of the latter extends through and beyond a hole in a wall of the shell.

The preferred example of trimming device

[Price 4s. 6d.]

according to the invention is illustrated in the accompanying drawings in which:

Figure 1 is a perspective view; and

Figure 2 is a part sectional elevation looking in the direction of the arrow *a*, Figure 1.

The device comprises a table 1 for the reception of a sheet to be trimmed, a presser strip 2, which may be of clear synthetic plastic, near one longitudinal edge of the table 1 and a longitudinal blade 3 at that edge of the table adjacent to the strip.

The side members 4, 4 of the table extend beyond the vicinity of the blade 3 and also extend upwardly; they carry a longitudinal rail 5 on which a carriage 6 is slidable and is turnable on the axis of the rail, the rail lying well clear of the blade 3 at that side thereof furthest from the surface of the table 1 and higher than the said surface.

A spindle 7 for a rotary cutter blade 8 is mounted in the carriage by nuts 9 at its ends which clamp it to a longitudinal web 10 extending from end to end of the carriage. The rotary cutter blade is centrally bossed at 11; the boss is surrounded by a flexible tyre 12 which when the carriage is in the position shown in the drawings bears against the strip 2 and in so doing holds the spindle 7 parallel with the table surface and so holds the plane of the cutting edge 13 of the blade 8 at right angles to the said surface with part of the blade 8 facing the blade 3.

A bush 14, e.g., of nylon, rotatably and slidably supports the blade 8 on the spindle 7; a spring 15 between washers 16 near the bush and washers 17 near one of the nuts 9 thrusts the blade 8 into contact with the blade 3.

Material to be trimmed has a margin slipped under and beyond the strip 2 to the desired extent and the carriage is run along the rail 5 with the result that the blade 8 is rotated by reason of the contact of the tyre 12 with the strip 2 and the material is severed along the line of the blade 3.

For the purpose of enabling the blade 8 to be readily and cleanly turned with the carriage about the axis of the rail 5 a push button 18 is slidably mounted on the spindle 7 at that side of the boss 11 furthest from blade 8 and a spring 19 is interposed between the push button and the boss. An end of the push button extends through and well beyond a hole in a longitudinal wall 20 of the carriage. Hence the push button is readily accessible externally of the carriage; and when it is depressed it thrusts the blade 8 well clear of the blade 3 so that the carriage can be swung on the rail 5 without danger of the blade 8 fouling the blade 3 or other part of the device. As the push button avoids the need for an operator to depress the cutter blade 8 with his fingers

the carriage comprises a shell 21 in which substantially the whole of that part of the rotary blade not lapping the blade 3 lies. The shell thus prevents inadvertent contact of the operator's fingers with the blade 8 when the device is in use.

Spring 19 ensures that the head of the push button extends well beyond the wall 20; a flange 22 on the push button, by contact with the inner face of wall 20, prevents the spring 19 from thrusting the push button out of the shell.

WHAT WE CLAIM IS:—

1. A device for trimming paper and like sheet material comprising a rotary cutter blade and a longitudinal counter blade, said rotary blade being carried by a mounting which is hinged to enable the rotary blade to be moved to and from a position where part thereof laps the longitudinal blade under spring pressure and which is movable lengthwise of the device so that when the said part is in lapping position material lying in the path of the rotary blade as the latter is moved with its mounting lengthwise of the device is sheared by the joint action of the two blades, wherein means operable from a zone lying clear of the rotary blade is provided on the said mounting adapted to effect displacement of the rotary blade in a direction opposite to that in which said blade is urged by the spring pressure so that said mounting, with the rotary blade, can be turned on its hinge axis without the rotary blade fouling the longitudinal blade.

2. A device according to claim 1 wherein said mounting is slidable along and turnable on the axis of a longitudinal guide rail mounted in the device.

3. A device according to claims 1 or 2 wherein the mounting for the rotary blade comprises a shell in which substantially the whole of that portion of the rotary blade not lapping the longitudinal blade lies.

4. A device according to claim 3, wherein the means for displacing the rotary blade in opposition to spring pressure has a part accessible externally of the shell.

5. A device according to claims 1, 2, 3 or 4 wherein said means comprises a push button slidable on a spindle bearing the rotary blade, said push button being located at that side of the blade opposite to the side at which the spring pressure is applied.

6. A device according to claim 5 wherein a compression spring is located around said spindle between the rotary blade and the push button.

7. A device according to any one of the preceding claims wherein said mounting comprises a knob for facilitating lengthwise

movement of the mounting and rotary blade.

8. A device for trimming paper and like sheet material substantially as herein described and shown in the accompanying drawings.
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BROMHEAD & CO.,
Chartered Patent Agents,
St. Paul's Chambers,
19-23 Ludgate Hill,
London, E.C.4.

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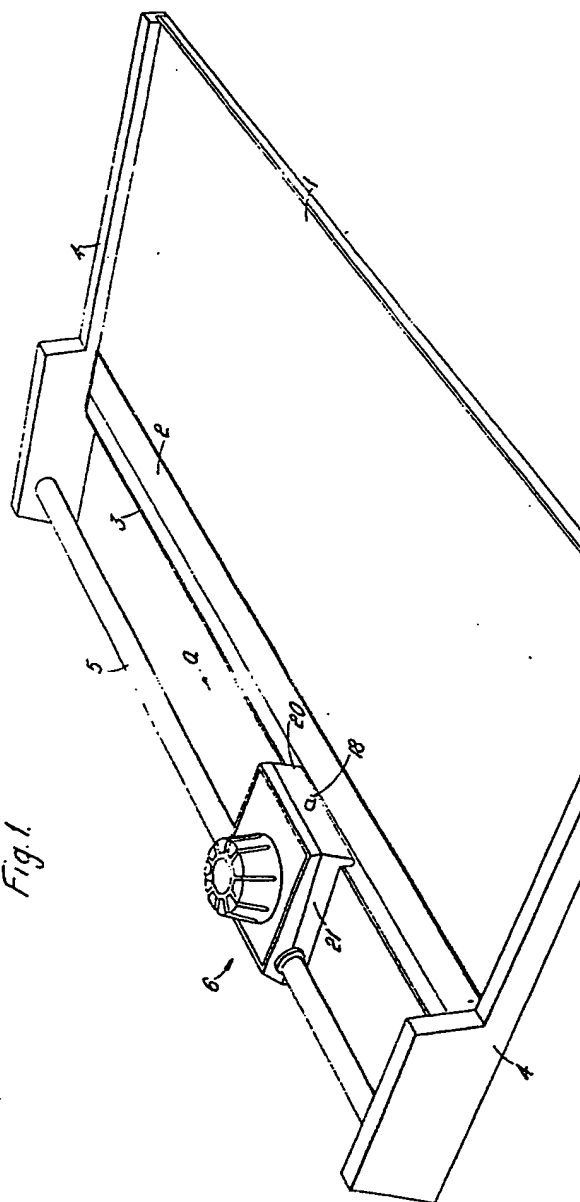


Fig. 1.

1141951 COMPLETE SPECIFICATION
2 SHEETS *This drawing is a reproduction of
the Original on a reduced scale*
Sheets 1 & 2

Fig. 2.

